

This invention relates to pouring spout structures for metal containers and is an improvement of my Canadian Patent No. 379,131, dated January 24, 1939.

5 In my prior patent, I have disclosed a pouring spout structure for containers which employs a removable cover and in which the pouring spout structure is formed to rise from the base of the depressed portion of the cover to overlap the rim of the cover and in which the rim of the cover is formed to overlap the rim of the container when the cover thereof is in normal mounted position. This structure was found to be of practical utility but became
10 expensive to make because of the necessity of forming a separate spout structure to be fitted to the cover and lapped around the discharge orifice as well as to be fitted over the rim of the cover and lapped therewith.

15 These disadvantages are overcome by the present invention which can be made very economically by special formation of an end of the container which can be provided with a large opening and removable cover in the opposite end of the container, if desired.

20 According to the present invention, a permanent end of the container is formed with an inwardly depending wall adjacent to the rim and extending substantially transversely to the plane of said end to form a pouring cavity and terminating
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in a ledge below and substantially parallel to the plane of said end to define a pouring orifice, a portion of the depending wall directly adjacent to the container rim being sloped from said ledge upwardly to merge with said rim so that the sloped portion and that portion of said rim registering therewith, forms the pouring spout.

Preferably, the structure is such that the end of the container at the periphery of said cavity is formed with a rim designed to merge with the container rim at its juncture with the sloped portion and wherein the cavity rim is lower than the container rim.

This pouring spout structure is designed to operate in conjunction with a cover therefor which includes a stopper designed to fit the orifice and which is flanged around its upper end and includes an apron having a down-turned lip at its outer end so that the apron covers the spout portion of a cavity and, together with said down-turned lip, laps said portion of the container rim, the said flange being lipped in other portions thereof to lap the cavity rim and substantially engage the container end at the outer base of the cavity rim when said cover is in mounted position so that when in the latter position it is substantially flush with the rim of the container except in the area of the lapping of said apron and said container rim.

The invention will be clearly

understood by reference to the following detailed specification taken in conjunction with the accompanying drawings, in which

Figure 1 is a fragmentary perspective of a container showing one end thereof formed with the pouring spout structure of the present invention;

Figure 2 is a perspective view of the cover for the pouring spout structure;

Figure 3 is a fragmentary longitudinal section taken through the container centrally across the pouring spout structure to illustrate more clearly, specific details; and

Figure 4 is a fragmentary top plan view of the pouring spout structure in itself and without the cover.

Referring to the drawings, A indicates a suitable metal container formed with an end permanently connected thereto at the rim 11, the container end being provided with pouring spout structure B. This is comprised by drawing the container end to form a pouring spout cavity 12 therein adjacent to the rim of the container. The cavity is defined by an inwardly depending wall 13 extending substantially transversely to the plane of said end and terminating in an annular ledge 14 which defines a pouring orifice 15. A portion of the wall 13 directly adjacent to the rim 11 is sloped upwardly as at 16 from the ledge 14 to merge with the rim 11 so that this sloped portion and that portion of the rim directly registering therewith, forms the pouring

spout proper.

Preferably the end of the container around the periphery of the cavity 12 is formed with a rim 17 which substantially merges with the container rim 11 at the juncture of the latter and said sloped portion of the pouring spout structure. The cavity rim 17 is lower than the rim 11 so that when the cover for the pouring spout structure is applied, it will be substantially flush with the rim of the container, except for a lapping thereof at the container rim as hereinafter referred to.

The pouring spout cover C is similar to that employed in my prior patent and embodies a stopper 18 depressed from the material leaving a flange 19 at its upper extremity. This flange is extended in one area to provide an apron 20 having a down-turned lip 21 so that the apron may cover the spout or sloped portion 16 of the structure and, together with the lip 21, will lap that portion of the container rim 11 which registers with the spout 16. Other portions of the flange 19 are lipped as at 22 and 23 to lap the cavity rim 17 and substantially engage the container end 10 when the cover is in mounted position so that the cavity 12, with its spout portion, is completely covered when the stopper is in the pouring orifice 15 and the whole structure is totally enclosed except for the opposed offset portions 24 of the flange 19 which leave a slight space between the top of the cavity rim 17

and the offsets 24, to permit the insertion of a prying tool for the ready removal of the cover C from the pouring spout structure B.

It will be appreciated that the foregoing structure constitutes an improvement over my prior patent previously mentioned since it eliminates the formation of a separate pouring spout structure for attachment to a part of the container and the work and cost of applying this separate structure to the container, and provides a pouring spout structure which is an integral part of the container, since it is formed in the end wall of the container and in such a manner that the spout portion merges with the rim and the rim thus provides a perfect substantially continuing lip of the spout. The formation of the cavity is a very simple dieing operation which simultaneously will permit the forming of the rim 17 around the cavity in contradistinction to a special formation of a bead or a double rim as in my prior structure. The rim 17 not only serves to strengthen the end of the container in the area of the cavity but also co-operates with the flanged cover for the structure and permits the formation thereon of a shallow curving lip that readily fits accurately with the rim.

The present invention, in addition, provides further advantages. On the one hand, where it is employed with a container provided with two ends which do not provide for access to

the can except through the orifice 15, it is possible to employ a slightly smaller tin than in the case where an extra opening and cover structure therefor is employed such as illustrated in my prior patent, because the contents can be filled completely up to the top and the only displacement within the container is the depending portion of the spout structure in the end 10. This contrasts with the overall displacement of a large cover depressed into a correspondingly large opening in the end of the tin and which cover was formerly formed with a pouring spout structure thereabove in my prior structure.

Alternatively, if it is found desirable to employ such a large cover, the present invention permits this, for the pouring spout structure in the present invention can be formed in one end of the tin and the opposite end of the tin can be formed with a large opening to receive this large type of cover, therefore giving the user the option of extracting the contents either through the pouring spout or through the large opening at the opposite end of the tin.

Finally, since the cover for the pouring spout structure is substantially flush with the rim of the tin, it will not interfere with stacking or handling of the containers and it will also permit the pouring spout end of the tin to be used as the base of the tin where, for instance, the opposite end of the tin is formed with a large opening and cover therefor.

The embodiments of the invention in which an exclusive property or privilege is claimed, are defined as follows:

5 1. In a metal container having a peripherally rimmed end, a pouring spout structure comprising in combination: an inwardly depending wall formed in said container end adjacent to the rim extending substantially transversely to the plane of said end forming a pouring cavity and
10 terminating in a ledge, below and substantially parallel to the plane of said end, defining a pouring orifice, a portion of said depending wall directly adjacent to said rim being sloped from
15 said ledge upwardly to merge with said rim, said sloped portion and the portion of said rim registering therewith, forming said pouring spout.

20 2. A pouring spout structure as claimed in Claim 1 in which the end of said container around the periphery of said pouring cavity is formed with a rim merging with the container rim at its juncture with the sloped portion, said cavity rim being lower than the container rim.

25 3. A pouring spout structure as claimed in Claim 2 in which a cover is provided for the pouring spout structure including a stopper designed to fit the pouring orifice, said stopper being
30 flanged around its upper end and including an apron

having a down-turned lip at its outer end to
cover the spout portion of said cavity and,
together with said lip, to lap the container rim,
said flange being lipped in other portions thereof
to lap the cavity rim and substantially engage
the container end at the outer base of the cavity
rim when said cover is mounted, said cover, when
in the latter position, being substantially flush
with the rim of the container except in the area
of the lapping of said apron and said container
rim.